



LIGHT

Energy Sensor

- Comparison of photosynthetic energy with total solar radiation
- Use in filtered or artificial lighting
- Ecosystem studies
- Use in greenhouses, etc.



The Skye Instruments SKE 510 is a waterproof cosine corrected sensor, which measures energy in units of watts/m^2 falling in the photosynthetic waveband 400-700nm. The measurement of energy within this defined waveband is particularly useful when studies involve the use of other equipment, such as

thermopiles, which measure energy. Also, the defined response curve means that the sensor may be used in conditions of mixed lighting, since strong 'out of band' sources will be ignored, only energy within the 400-700nm waveband will be measured. The sensor effectively has a response derived from

measuring the difference in output between two solarimeters where one is filtered to be sensitive only to wavelengths greater than 700nm.

SKE 510 SPECIFICATIONS

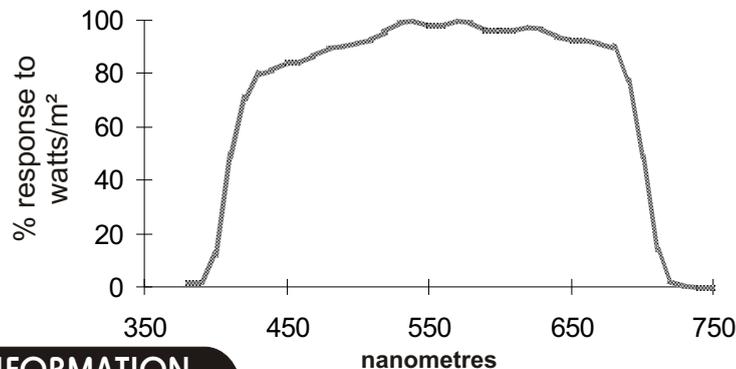
Dimensions	Weight	Construction	Cable	Sensor	Detector	Filters	Sensitivity -current (1)	Sensitivity -voltage	Working range (2)
	130g. (with 3m cable)	Material Dupont 'Delrin' Fully sealed to IP68	2 core screened DEF std 61-12/4.5	Cosine corrected head	Blue enhanced planar diffused silicon	Optical glass	3.5µA/ 100Wm ²	1mV/ 100Wm ²	0-5000 Wm ²
Linearity error	Absolute calibration error (3)	Cosine error (4)	Azimuth error (5)	Temperature coefficient	Longterm stability (6)	Response time (7) - voltage output	Internal resistance - voltage output	Temperature range	Humidity range
<0.2%	typ. <3% 5% max.	3%	<1%	±0.1%/°C	±2%	10ns	c.300 ohms	-35 to +70°C	0-100% RH

NOTES ON SPECIFICATIONS

- (1) Current output varies from sensor to sensor. Each individual unit will have a slightly different output. A calibration certificate is supplied with each sensor
- (2) All Skye sensors will work at levels of irradiance well above that found in terrestrial sunlight conditions, room or growth chamber lighting
- (3) Main source of this error is uncertainty of calibration of Reference Lamp. Skye calibration standards are directly traceable to N.P.L. standard references.
- (4) Cosine error to 80° is typically 5% max. Figures shown are for normal use sources, e.g., sun plus sky, diffuse sun, growth chambers, etc.
- (5) Measured at 45° elevation over 360°
- (6) Maximum change in one year. Calibration check recommended at least every two years. Experience has shown that changes are typically much less than figures quoted
- (7) Times are generally less than the figure quoted, which is in nanoseconds. They may be slightly increased if long leads are fitted, or those of a higher capacity cable

GRAPH

PAR ENERGY SENSOR SKE 510



ORDERING INFORMATION

Sensor

SKE 510 Energy sensor

Accessories

SKM 221 Levelling unit
SKM 226 Long arm pole/wall mount

Meters and dataloggers

SKE 500 Display meter
SKT 660S Spectr Sense
SDL 5000 series DataHog datalogger

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